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Author(s): Richard Evans Schultes

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THE APPEAL OF PEYOTE (*LOPHOPHORA*

WILLIAMSII) AS A MEDICINE¹

By RICHARD EVANS SCHULTES

I

IN connection with a botanical and chemical investigation of the peyote plant (*Lophophora Williamsii* (Lem.) Coult.), I have pursued ethnobotanical studies regarding its use among the Kiowa, Kickapoo, Shawnee, and Wichita of Oklahoma. During these studies, additional information was received from individuals of neighboring tribes. The investigation revealed that several erroneous ideas and misinterpretations regarding the use of peyote have become widespread.

For more than two centuries, the use of the peyote-cactus as a religious sacrament has been slowly diffusing northward among the southern Plains tribes of the United States.² For more than fifty years, there has been a growing interest in the peyote-cult among American anthropologists. An extensive literature³ has appeared concerning the ceremonial use of *Lophophora Williamsii* in the United States as well as in Mexico, where its use extends back probably for more than twenty centuries.⁴

Until recently,⁵ the anthropological information was in a more or less chaotic state. Shonle, Wagner, and others have dealt with the diffusion of peyote and conditions making possible its rapid spread.⁶ Although occasional references to the "appeal" of peyote are found, there does not seem to be any critical study of what may be termed the *appeal-phase* of the peyote problem. Petruccio, Wagner, and especially Radin⁷ have devoted more attention to the appeal of peyote than have other anthropologists, but a consideration of this neglected subject from an ethnobotanical point of view should prove of value.

¹ For constant guidance and help during the entire course of my study of peyote I am deeply grateful to Professor Oakes Ames, director of the Botanical Museum of Harvard University. To Professor Clyde K. M. Kluckhohn of Peabody Museum of Harvard University I wish to express my appreciation of his interest in the preparation of this paper.

² Schultes, *Peyote—an American Indian Heritage from Mexico*.

³ Consideration of general ethnological problems relating to peyote lies beyond the range of this paper, but it is pertinent to mention that information concerning the use of *Lophophora Williamsii* exists for the following tribes: Arapaho, Comanche, Cora, Delaware, Huichol, Ioway, Kickapoo, Kiowa, Menominee, Mescalero Apache, Omaha, Pawnee, Sac and Fox, Shawnee, Taos, Tarahumare, Tepehuane, Wichita, Winnebago. Peyote is known to be used in many other tribes, but detailed reports have not appeared.

⁴ Rouhier, *La Plante qui fait les yeux émerveillés*; Sahagun, *Historia general*.

⁵ La Barre, *Peyote Cult*.

⁶ Shonle, *Peyote*; Wagner, *Entwicklung und Verbreitung*.

⁷ Petruccio, *Diabolic Root*; Wagner, *Entwicklung und Verbreitung*; Radin, *Peyote Cult of the Winnebago*; *idem.*, *Winnebago Tribe*; *idem.*, *Crashing Thunder*.

It is not the purpose of this paper to present a complete ethnobotanical study of the peyote-cult, but rather to consider whether its widespread diffusion is due to the vision-producing properties attributed to the alkaloids of *Lophophora Williamsii* or to the supposed therapeutic properties of the plant. In a consideration of this kind, certain fundamental facts pertaining to the botanical, chemical, and pharmacological investigations relating to *Lophophora Williamsii* must be enumerated, for only on such a foundation can an accurate interpretation of peyote and some of its problems be made.

II

Lophophora Williamsii is a small, grey-green, spineless, napiform cactus possessing remarkable narcotic properties,⁸ rarely exceeding fifteen centimeters in length and five or six in diameter at the top. The chlorophyll-bearing crown is less than one quarter the length of the plant. Peyote plants are normally unicephalous, but age and injury may cause them to become polycephalous, assuming bizarre shapes, often resembling a deer-hoof imprint, a circumstance which may account for the close association of peyote with the deer in Mexican Indian mythology.⁹ The crown is divided into from five to thirteen broad, rounded ribs, separated by straight or spiral furrows. Transverse grooves may divide the ribs into a number of low, polyhedral tubercles, each bearing an areola from which grows a tuft of matted hairs. These tufts of greyish-white, wooly hairs give a lanuginous appearance to the plant which is of importance in etymological considerations.¹⁰ The flowers, varying from red to pink or white, are borne on the apical areolæ at the top of the crown during June and July. When the crowns of peyote are cut off and dried, they form the so-called *mescal buttons* which are eaten in the ceremony.

Lophophora Williamsii is not a rare plant. It grows on both banks of the Rio Grande and in scattered places in Aguas Calientes, Chihuahua, Coahuila, Hidalgo, Jalisco, Nuevo León, Querétaro, San Luis Potosí, Tamaulipas, and Zacatecas. The Indians of Mexico and the southern plains make annual "pilgrimages" to gather it. Those tribes too distant to visit the

⁸ In considering problems in which the word *peyote* forms an integral part of the basis of argument, botanical identification is not only desirous but essential. In another paper (*Peyote [Lophophora Williamsii] and Plants Confused With It*), I have called attention to at least fifteen entirely distinct and unrelated plants which are known under the term *peyote*, and a large number of additional plants are confused with *Lophophora Williamsii* through its other common names, such as *mescal*, *mescal bean*, *piule*, *dry whiskey*, *ololuiqui*, etc.

⁹ Lumholtz, *Unknown Mexico*; B. P. Reko, *Star-names of the Chilam Balam*.

¹⁰ Schultes, *Peyote (Lophophora Williamsii) and Plants Confused With It*.

peyote-fields procure their supplies by mail from merchants in lower Texas who deal exclusively in mescal buttons.

The narcotic properties of peyote have attracted wide attention. Peyote-



FIG. 1. Peyote plant: a spineless cactus—*Lophophora Williamsii* (Lemaire) Coulter—the sole species in a monotypic genus. The chlorophyll-bearing crown, when cut from the root and dried, is known as the “mescal button.” (Natural size.)

intoxication is divisible into two general phases: a period of contentment and over-sensitivity, and a period of nervous calm and muscular sluggishness, often accompanied by hypocerebrality, colored visual hallucinations, and abnormal synæsthesiæ.¹¹ Alterations in tactile sensation, very slight muscular incoordination, disturbances in space and time perception, and

¹¹ Cushny, *Pharmacology and Therapeutics*; W. E. Dixon, *Physiological Action of the Alkaloids*; Guttman, *Artificial Psychoses*; Hare, Caspari, and Rusby, *National Dispensatory*;

auditory hallucinations may accompany severe peyote-intoxication.¹² The most striking characteristic, however, is the occasionally induced peyote vision which is often fantastically colored.¹³



FIG. 2. "Type" mescal buttons: dried crowns of *Lophophora Williamsii*, collected in Mexico by Carl Lumholtz and sent to Gray Herbarium in 1897. These are somewhat larger than those used in the United States. ABOVE: View of top of crown. BELOW: View of base of crown (the central perforation is for stringing for transportation). (Natural size.)

Rouhier, *La plante qui fait les yeux émerveillés*; Schultes, *Peyote* (*Lophophora Williamsii* [Le-maire] Coulter) and its Uses; Wood, Remington, and Sadtler, *Dispensatory*.

The pharmacological literature is scattered and voluminous. Since the bibliography of this paper is not intended to be a complete reference list to peyote literature, but merely the most pertinent, only the more important pharmacological sources have been included.

¹² Beringer, *Meskalinrausch*; Guttman, *Artificial Psychoses*; Klüver, *Mescal*.

¹³ Klüver, *Mescal*.

Peyote-intoxication is unique in that during it consciousness is not lost, control of the limbs and senses is maintained, there is no tendency to commit acts of violence, and seldom do uncomfortable effects accompany or follow it. These characteristics are reported in the literature, and I have observed them in the field.

Many investigators agree that peyote is not a habit-forming narcotic. Its use is productive of little social and moral degradation or physical harm, notwithstanding statements to the contrary. The assertions so often made concerning its aphrodisiac properties have been disproved.¹⁴ Furthermore, there is experimental evidence which suggests that it is definitely anaphrodisiacal.¹⁴

The narcotic and medicinal properties of peyote are traceable to active principles contained in the tissues of the plant. From four to eight alkaloids may be present in varying amounts and proportions: mescaline, anhalonine, anhalonidine, pellotine, lophophorine, anhalamine, anhalinine, and anhalidine.¹⁵ Several of the alkaloids of *Lophophora Williamsii* have found minor uses in modern medicine.

In the ceremony, peyote is eaten dry, but occasionally fresh plants are consumed.¹⁶ The dried mescal buttons keep indefinitely and are stored in bags for use. They possess a very bitter taste, but in spite of this, they are chewed and swallowed in great number by peyotists. The smallest consumption by a single person is about four buttons at each meeting. It is impossible to estimate the largest, but I have seen an Indian eat more than thirty at one ceremony. Other investigators¹⁷ report doses as large as ninety buttons. An estimate of the average consumption, however, would probably be about twelve buttons by each person at a single meeting.

Occasionally, mescal buttons are steeped in water, and the resulting

¹⁴ Beringer, *Meskalinrausch*; Fernberger, *Further Observations*.

¹⁵ Schultes, *Peyote* (*Lophophora Williamsii* [Lemaire] Coulter) and its Uses.

¹⁶ Shonle (*Peyote*) states: "Lumholtz does not emphasize the visions in his accounts of the Tarahumare and Huichol, probably because these tribes obtain the fresh peyote used by the more northern tribes and which has therefore caused the dance to be the central feature of the ceremony rather than the quiet meditation and visions. But wherever the dried peyote is used, the vision predominates." In this connection, it must be pointed out that dried peyote is used in Mexico and that I have not been able to discover any difference in physiological action between the fresh and the dried peyote. Since the anhalonium alkaloids are non-volatile, it is not to be expected that desiccation of the plant tissue would have any effect on their concentration. Therefore, the difference in expression of peyote worship in Mexico and the United States cannot be attributed to a physiological effect of the plant, but, it seems to me, must be due to the ceremonial background into which peyote was naturalized in the Plains culture area.

¹⁷ Mooney, *Mescal Plant Ceremony*.

"peyote tea" is drunk. This tea is widely used both in the ceremony and in daily life when peyote is administered medicinally. In Mexico, fresh peyote is ground on a metate, and the resulting thick brown liquid is drunk.¹⁸ Mexican Indians sometimes add peyote, thus prepared, to alcoholic fruit juices to produce a delirious intoxication.¹⁹ This use of *Lophophora Williamsii*, however, should not lead to its confusion with mescal, the alcoholic Agave-brandy prepared from *Agave* spp.

III

The visual hallucinations often induced by peyote have been considered of fundamental importance as an "appeal" in the diffusion of the peyote cult among the Plains Indian tribes.

It has been pointed out²⁰ that formerly many aspects of Plains Indian life centered around the pursuit of visions. The vision-quest "as an affair of maturity" has become widely recognized as an outstanding characteristic of Plains culture as a whole.

Since visions are occasionally induced during peyote intoxication, it has been thought that the fantastic peyote vision was so appealing that the Plains Indians adopted the peyote cult as an easy way of obtaining visual hallucinations. Shonle, for example, writes: "All over the Plains where the dried peyote is used, the Indians delight in the peyote visions and respond to their thrill, even when the dreams are terrifying in character."²¹

From the belief that the vision configuration is the integrating principle in the Plains peyote ceremony a natural inference has been that the rapidity with which peyote has spread was due to the ease with which it could become naturalized to the established pattern. According to this, peyote offered a method of obtaining visions without the self-torture and privation resorted to by some of the Plains tribes in the vision quest.

Peyote did not have to win its way into a system of religion which was without visions. Rather, it facilitated obtaining visions already sought. It was holy medicine given to the Indian that he might get into immediate touch with the supernatural without long periods of fasting. Thus, the underlying belief in the supernatural origin of visions is important among factors contributing to the diffusion of peyote and, in a general way, defines the area of its probable spread.²²

In my opinion, the principal appeal of peyote has been and continues

¹⁸ Diguet, *Les cactacées utiles*.

¹⁹ V. A. Reko, *Magische Gifte-, Rausch- und Genussmittel*.

²⁰ Benedict, *Visions in Plains Culture*.

²¹ Shonle, *Peyote*.

²² *Ibid*.

to be centered around the therapeutic and stimulating properties of the plant and not around its vision producing properties. In other words, the peyote vision has been incidental while the medicinal reputation of peyote has been fundamental in the establishment, spread, and, to some extent, in the maintenance of the peyote cult in the United States.

IV

The medico-religious peyote cult was already established in Mexico when the Spaniards arrived. The earliest record of the use of *Lophophora Williamsii* is that of Sahagun²³ who wrote that the Chichimeca ate the root, *peiotl*, which induced amusing or terrifying visions and stimulated them in battle. He failed to note whether or not these Indians used the plant therapeutically. Cardenas²⁴ also wrote of the terrifying visions which followed indulgence.

Hernandez,²⁵ describing the plant as *Peyotl zacatecensis*, emphasized the fact that it was used in prophesying and in the treatment of pains. He did not mention peyote visions.

Likewise, Ortego, who described the Cora ceremony, made no mention of visions. Furthermore, Arlegui did not report visual hallucinations, but stated emphatically that peyote was administered as a panacea and as an aid in prophesying.²⁶

Thus, from a survey of early Mexican accounts of the use of peyote, the importance of the plant as a medicine seems to overtop the importance of peyote visions.

Correlated with virtues which are valuable to aboriginal therapy, there are properties making peyote a remarkable stimulant and tonic. Indeed, so close to each other are some of the uses of the plant for stimulation and for curing disease that it is often difficult to distinguish between the two. Since these uses both pertain to the retention or the restoration of a feeling of well-being, it is obvious that they must be closely associated.

Sahagun, Ortego, and others have described peyote as a favorite stimulant in warfare.²⁷ Sahagun reported that it strengthened and encouraged the warriors. De la Motta²⁸ stated that the Spanish were severely handicapped in their conquest of the Nayarit kingdom by the resistance of the

²³ Sahagun, *Historia general*.

²⁴ Cardenas, *Primera parte*.

²⁵ Hernandez, *De historia plantarum*.

²⁶ Ortego, *Historia del Nayarit*; Arlegui, *Cronica*.

²⁷ Sahagun, *Historia general*; Ortego, *Historia del Nayarit*; Cardenas, *Primera parte*.

²⁸ Klüber, *Mescal*.

natives of Sierra de Alica, whose great opposition was attributed to their constant ingestion of peyote. Galvez noted the use of the plant during Tamaulipas dances, and Perez reported similar uses by the Lagunero and Acaxe tribes.²⁹

Peyote is widely used as a stimulant in Mexico at the present time. Lumholtz,³⁰ for example, found the Tarahumare using the plant for stimulation. He tested it to his own satisfaction, comparing its physiological action with that of *Erythroxylon Coca* Lam. Diguët corroborates this, saying: "In using the drug moderately, the partaker is endowed with energy which permits him to overcome great fatigue and to endure hunger and thirst for five days."³¹

That the therapeutic appeal of *Lophophora Williamsii* is still strong in Mexico is shown by recent writers. Lumholtz wrote that the Tarahumare, Huichol, and Tepehuane apply peyote externally for rheumatism, wounds, burns, snakebites, and skin diseases. Furthermore, he stated that "it is an absolute cure against the painful stings of scorpions, and, as such, deserves to be widely known."³² Bennett and Zingg³³ have found that the Tarahumare apply crushed peyote externally as an ointment. In this tribe "hicouri (peyote) dances are more frequent during times of sickness."³⁴ Peyote has been widely used in Mexico as a cure for arrow wounds; the dried, powdered root being packed into the wound until healing occurs.³⁵

In Mexico, as in the United States, the therapeutic use of *Lophophora Williamsii* grades into the superstitious and pseudotherapeutic. To its use is attributed health and longevity; rubbed on the knees, it is believed to give strength in walking; in curing disease, it is said to fortify the body against future ills and to purify the soul. Unlike many herbs, peyote is not offered to the dead, but is eaten at death feasts to fortify the living.³⁴ Among the Zacateco, peyote is revered above all other plant remedies.³⁵ The Tarahumare believe that the illness resulting from touching or breaking of *Datura meteloides* Dunal can be cured only with peyote.³⁶

Lophophora Williamsii continues to be valued by Mexican Indians as a powerful medicine, but its therapeutic use is not confined to the Indian population. Peyote is offered for sale in drug markets in many parts of Mexico and has been listed officially in the *Farmacopia Mexicana*. Indeed, the medicinal use of peyote has become so well known that Mexicans have

²⁹ Brinton, *Nagualism*; Perez, *Historia*.

³⁰ Lumholtz, *Unknown Mexico*.

³¹ Diguët, *Les cactacées utiles*.

³² Lumholtz, *Unknown Mexico*.

³³ Bennett and Zingg, *Tarahumara*.

³⁴ Lumholtz, *Unknown Mexico*.

³⁵ Alègre, *Historia*.

³⁶ Bennett and Zingg, *Tarahumara*.

incorporated the word *peyote* into the verb *empeyotizarse*, the usual term employed among rural Mexicans to signify self-medication (with aspirin) for indisposition following alcoholic intoxication.

The emphasis on the curing powers of peyote is as great among the northern Indians who use it as it is among the Indians of Mexico. The Kiowa and Comanche, for example, the earliest recipients of peyote on the plains, rely on the cactus as a panacea. Among the Oklahoma tribes with which I worked, I found that there is hardly a disease which is not believed to be curable with peyote. Some of the ills listed as responding to peyote were tuberculosis, pneumonia, scarlet fever, intestinal ills, diabetes, rheumatic pains, colds, grippe, fevers, and venereal diseases. Among the Kiowa, partly masticated mescal buttons are packed around an aching tooth. The Delaware also practice this type of dental therapy.³⁷ A Shawnee informed me that peyote tea was a good antiseptic wash for open wounds and a soothing liniment if applied warm to an aching limb. It is used "as white man uses aspirin." Mooney observed: "I have also seen an Indian eat one between meals as a sort of appetizer."³⁸ Several mescal buttons are given three times during childbirth among the Kiowa, Kickapoo, Shawnee, and probably other Plains tribes. The frequent use of peyote as a medicine has led to the statement that the plant is employed as a habit-narcotic, but field investigators deny that this is so.

V

The sustaining properties of *Lophophora Williamsii*, together with its supposed medicinal virtues, are fundamental to practically every peyote origin myth. The peyote vision seldom enters into circumstances enumerated by the Indians as having led to the discovery of the properties of the "sacred cactus." Usually the myth relates the remarkable sustaining powers of peyote when eaten by a lost starving Indian. Similarly, a Mexican myth³⁹ tells of the power of peyote to save a whole people engaged in desperate battle under adverse conditions. The essential point is that the stimulating, or sometimes the curative, properties of peyote provide the central theme of most myths, making it clear that this appeal is fundamental.

VI

An historical survey of the peyote cult in America indicates that, with few exceptions, the first peyote leader of a tribe was converted as the re-

³⁷ Petrullo, *Diabolic Root*.

³⁸ Mooney, *Mescal Plant Ceremony*.

³⁹ Lumholtz, *Unknown Mexico*.

sult of a cure and not through a quest for visions. Once converted, he usually tried to impress his friends with the remarkable virtues of the new plant. From a position of indifference or actual hostility, many of the first advocates of the peyote cult became ardent supporters of the religion centering around it. These advocates, likewise, encountered strong opposition from the older and more conservative elements in the tribe. With such powerful forces to fight, peyote leaders would naturally make use of the most influential recommendations that peyote possessed. In the healing power of *Lophophora Williamsii*, the peyotists found an appeal which completely swept aside conservative opposition and paved the way for rapid acceptance of the plant and its cult. Radin has emphasized this as follows:

In the early days of the peyote cult, it appears that Rave relied principally for new converts upon the knowledge of the great curative virtue of the peyote. The main point, apparently, was to induce people to try it, and I hardly believe that any amount of preaching of its direct effects, such as the hyper-stimulation induced, the glorious visions, and the feeling of relaxation following, would ever have induced prominent members of the medicine bands to do so. For that reason, it is highly significant that all the older members of the peyote speak of the diseases of which it cured them. Along this line lay unquestionably its appeal for the first converts.⁴⁰

Of the records of early peyote leaders, only one (John Wilson) indicates that the vision was considered as an appeal, and, in Wilson's case, the curative properties of peyote were stressed as much, if not more, than the vision.

Elk Hair, who simultaneously with John Wilson introduced peyote to the Delaware, consistently refused to eat peyote, although he was critically ill. Finally, however, he submitted to the pleas of friends to have a peyote ceremony for his recovery. The "cure" was successful, and Elk Hair became an ardent peyotist.⁴¹

Wilson introduced a slightly different type of ceremony to the Delaware. He was not converted through a cure, but became acquainted with peyote through a deliberate effort to learn its virtues. He went into seclusion and spent several weeks in a continuous peyote intoxication, during which time he was "continually translated in spirit to the sky-realm where he was conducted by peyote."⁴²

The Wilson ceremony is dominant among the Delaware today, and Petrullo feels that the reason for the failure of Elk Hair's ceremony was

⁴⁰ Radin, *Peyote Cult of the Winnebago*.

⁴¹ Petrullo, *Diabolic Root*.

⁴² Speck, *Notes on the Life of John Wilson*.

due to the fact that "he preached the old religion, and offered only another medico-religious cult," whereas Wilson "brought to his people a new religion, a hope of building anew, a definite severance with the past." This may be true to a slight extent, but it is clear that Delaware peyotism, like that of other American Indian tribes, is essentially a medico-religious cult. Petruccio calls attention to this fact himself when he says:

Thus, the peyotist subjects himself to the peyote intoxication, to prayer and concentration on religious matters for twelve and eighteen hours for the sake of helping a fellow man. By concerted effort, by attaining purity, by appealing to peyote, the devotees hope to win the attention of the spirit-forces and their intercession for the sick person. The personal enlightenment and other benefits that may come to one in the course of the meeting are merely incidental in relation to the major objective of effecting a cure.

This statement suggests that the element of curing and health is fundamental to Delaware peyotism.

Wilson himself considered peyote a great medicine, although his own conversion was not through a cure.

[He] approved the use of native herbal remedies, saying that they would do good, but he pointed out that as the peyote worshipper progressed in knowledge, he could ignore the effects of the native pharmacopeia and effect his cures upon himself and others by the sole use of peyote.⁴²

Rave preached about the healing properties of peyote while introducing it among the Winnebago. Like other early peyotists, he had experienced visions, but did not consider them fundamental. Radin emphatically stated:

The first and foremost virtue preached by Rave for the peyote was its curative power. He gives a number of instances in which hopeless venereal diseases and consumption were cured by its use; and this to the present day is the first thing one hears about.⁴³

This appeal of *Lophophora Williamsii* as a medicine may be duplicated in almost every tribe regarding whose peyote ceremony sufficient is known. Among the Kickapoo, Kiowa, Shawnee, and Wichita, I heard constant references to the fact that early peyote leaders in the tribes had experienced the curative powers of the plant and had taught of its medicinal virtues.

It is true that the therapeutic appeal is as vital and as influential today as it was fifty years ago. Many of the young peyote devotees whom I interviewed are sincere in their belief in the supremacy of peyote as a medicine.

⁴³ Radin, *Peyote Cult of the Winnebago*.



Peyote leader, showing the costume often worn by the “roadman” of the ceremony. A symbolic peyote is painted on the cheek. (Painting by Stephen Mopope, Kiowa.)

Their faith in the plant extends far beyond its value as a physical medication, and the enthusiasm with which they described cure after cure indicated clearly that conditions have changed little in this respect from the early days of the cult. Many who stray away from the peyote religion return to its folds in times of sickness and remain faithful when health is restored. La Barre⁴⁴ reports the case of a boy who, having left the peyote cult in his youth, returned to it during sickness twenty years later. This is probably not uncommon and it serves to illustrate once again the importance of the belief in peyote as a guardian and restorer of health.

VII

The importance of the curing ritual in the peyote ceremony has been completely overlooked by those who have written on the subject. Although a patient is not necessary to a peyote meeting, very often a sick person is treated during the course of a ceremony. This is common to both Mexican and American peyote ceremonies. Prayers for health and longevity are offered in the meetings, but definite ritualistic courses of treatment are resorted to whenever the seriousness of an illness warrants such action.

In Mexico, the Tarahumare carry out a pseudotherapeutic rite at the break of dawn.⁴⁵ No peyote additional to that consumed during the night is administered to the patient, however. In the Mexican rite, every worshipper takes part in the ritual and is believed to derive some health-giving power from the treatment, whereas in the American peyote curing ritual, the patient alone is treated.

Among the American peyotists, the curing rite is more therapeutic than is that of the Tarahumare, because additional doses of peyote are given to the suffering patient. Here peyote is used as an actual medicine, usually administered in the form of a tea. Literature on the curing rite is almost entirely lacking. Apparently, the form of the ritual is not yet stereotyped, but varies according to the preferences of the leader. The Kiowa leader who conducted the curing rite which I witnessed treated a young man suffering from tuberculosis. Leaving his place shortly after the ritual of the Midnight Water, the leader walked to the patient, lying at the side of the tipi. The fire-man handed the leader a cup of water, and the leader offered several prayers in which the words Jesus Christ were frequently used. He handed the patient fourteen mescal buttons which he himself had partly masticated before the treatment. While the patient was swallowing them, the leader waved the cup of water in cedar incense produced by

⁴⁴ La Barre, *Autobiography of a Kiowa Indian*.

⁴⁵ Lumholtz, *Unknown Mexico*.

throwing dried juniper needles (*Juniperus virginiana* L.) into the altar fire. He also wafted this incense to the patient's bared chest with an eagle feather fan. Following this, he chewed several more buttons, expectorated them into his cupped hands, and annointed the patient's head with the saliva while praying. Then he picked up a glowing ember from the altar fire and, placing it almost in his mouth, blew its heat over the patient's chest. The ritual ended with a long prayer. This cannot be taken as typical of all peyote curing rites, but similar rites are practiced in most American peyote circles.⁴⁶ This phase of the ceremony illustrates one of the practical manifestations of the belief that peyote is a supremely potent medicine.

VIII

Peyote has not remained within the confines of the Plains culture area. Indeed, from the first days of its rapid spread, peyote has diffused to tribes of several culture areas. At the present time, the peyote ceremony, as pointed out by Wagner⁴⁷ is practiced in four distinct culture areas—Plains, North Mexican, Eastern Woodland, Southwestern—and in one intermediate culture area by the Mescalero Apache.

In the spread of *Lophophora Williamsii* beyond the tribes of the plains, the vision appeal could not have exercised the same influence which it is assumed to have played in the Plains tribes, for, although visions are important in many Indian cultures, only in the Plains area was the vision quest fundamental enough to have suggested the linkage of this phase of the culture with the spread of peyote. The diffusion of peyote to so many other culture areas indicates that an "underlying belief in the supernatural origin of visions" cannot, as Shonle postulates,⁴⁸ define the area of the probable spread of peyote. If, however, the spread of the peyote cult be viewed as resting fundamentally on the medicinal appeal of the plant, no "area of its probable spread" can be suggested.

IX

An indication that the medicinal appeal of peyote is of fundamental importance is found when the native names of *Lophophora Williamsii* are examined. All of the tribes of the United States which use peyote and some

⁴⁶ A Lipan peyote curing rite is described in a recent article (Morris E. Opler, *The Use of Peyote by the Carrizo and Lipan Apache Tribes*, American Anthropologist, Vol. 40, pp. 271-85, 1938). According to Opler, peyote was used principally as a curative rite among the Mescalero, and that the Lipan peyote ceremony took on a more "curative coloring" after contact with the Mescalero since doctoring is a recent innovation.

⁴⁷ Wagner, *Entwicklung und Verbreitung*.

⁴⁸ Shonle, *Peyote*.

of the Mexican tribes understand and employ the term *peyote*. Some have naturalized the word into their own language. Both in the field and in the literature, I have found that the native, pre-peyote word for "medicine" has often been applied to the cactus, sometimes retaining its original connotation, sometimes losing it. The Delaware *biisung*, the Taos *walena*, the Comanche *puakii*, and the Omaha *makan*, are reported in the literature as terms formerly meaning "medicine," but now signifying "peyote."⁴⁹ Likewise, I have found that to designate "peyote," the Kickapoo use *naw-tai-no-nee* and the Shawnee *o-jay-bee-kee*, both of which terms formerly meant "medicine." Thus, it seems that there is a wide-spread understanding of *Lophophora Williamsii* as a great medicine.

In this connection, it is interesting to note that an Aztec word⁵⁰ for peyote—*ichpall*—means, according to an analysis by Reko, "wooly medicine" or "fleecy drug."

X

A thorough consideration of the literature combined with field observations indicates that the importance of peyote visions has been exaggerated out of its proper proportion. The fact that, when visual hallucinations do accompany peyote intoxication, they are of a fantastic nature has led to a great amount of emphasis being placed on their psychological interpretation and anthropological significance. Accounts of peyote visions among Indians, however, are very rare; only a few having been reported in the literature. The rarity in the literature of these visions is in complete harmony with certain observations made in the field. Of the many Indians of all ages with whom I talked, only a few had ever experienced visions during peyote ceremonies. Everywhere among the Oklahoman tribes with which I worked I found the same disinterest in the peyote vision. There was no indication of the pursuit of visions during peyote ceremonies.

One Indian informed me that visions were exceedingly rare and were a reward to old peyotists for faithfulness to the moral teachings of the religion. Still others insisted that it was "wrong" to use peyote and the peyote ceremony as a means of obtaining visions. Petrullo⁵¹ found the same feeling among the Delaware, and part of Wilson's teachings were: Keep your mind on peyote and don't think about other people around you or anything outside. Look at peyote and the fire all the time and think of it. Sit quiet and do not move around or be uneasy. Then you will not get sick [nauseated] or see

⁴⁹ Petrullo, *Diabolic Root*; Parsons, *Taos Pueblo*; La Barre, *Peyote Cult*; Gilmore, *Uses of Plants*.

⁵⁰ Chavero and others, *Mexico al traves de los siglos*.

⁵¹ Petrullo, *Diabolic Root*.

visions. Visions and nausea are signs of bad self-adjustment to the proper religious attitude.⁵²

XI

In conclusion, an evaluation of the relative importance of the peyote vision and of the medicinal and tonic properties of *Lophophora Williamsii* in relation to the diffusion and tenacity of the peyote cult may be summarized as follows:

1. The peyote vision is incidental and of little significance, as shown by the following considerations:

- (a) peyote visions are relatively rare;
- (b) peyote visions are not sought, but are often avoided as wrong;
- (c) proselytes almost without exception neglected the mention of visions as an appeal;
- (d) early writers did not, as a rule, emphasize peyote visions;
- (e) peyote has not confined itself to the Plains culture area, but has spread to other areas where the vision was of little importance in adult life.

2. The therapeutic and tonic properties of peyote are fundamental and of primary importance, as indicated by the following considerations:

- (a) all proselytes stressed the curative powers of the plant, sometimes to the exclusion of all other virtues;
- (b) most early writers mention the panacean uses of peyote;
- (c) most early peyote leaders were converted through a cure;
- (d) peyote is widely used in daily life and in the peyote ceremony as a medicine and stimulant, and has been shown to possess actual therapeutic possibilities;
- (e) the curing rite is an important part of many peyote ceremonies;
- (f) peyote origin myths are built upon the theme of the remarkable therapeutic and tonic powers of the plant;
- (g) the use of the words meaning "medicine" for "peyote" in many tribes signifies a deeply rooted and general understanding of peyote as a medicine.

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⁵² Speck, *Notes on the Life of John Wilson*.

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BOTANICAL MUSEUM, HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS